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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/765,840	01/29/2004	Denis Uzio	PET-2118	2332

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EXAMINER	
DOUGLAS, JOHN CHRISTOPHER	
ART UNIT	**PAPER NUMBER**
1764	

DATE MAILED: 10/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/765,840	UZIO ET AL.	
	Examiner	Art Unit	
	John C. Douglas	1764	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 July 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Examiner acknowledges the response filed on 7/26/2006 containing amendments to the claims, new claims, and remarks.

2. Examiner acknowledges claims 1, 4, 5, and 10 as amended and claims 11-14 as new.

3. A new rejection necessitated by amendment follows:

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claim 6 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Da Costa (US 6372125). Da Costa discloses impregnating a solution comprising a cobalt and a molybdenum element on an alumina support, sulfurizing the catalyst with a hydrogen and hydrogen sulfide mixture, and a carbonization step of contacting the catalyst with a hydrocarbon mixture resulting in a catalyst with 0.1 to 30 w% of a carbide phase (see Da Costa, column 4, line 66 – column 5, line 10, column 3, lines 8-19, and column 2, lines 19-25).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 1, 2, 4, 5, 7-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sadakane (EP 0745660) in view of Da Costa.

10. With respect to claims 1, 2, 4, 5, and 9-14, Sadakane discloses a catalyst that comprises active metals of molybdenum, tungsten, cobalt, and nickel and that the active metals are reacted with hydrogen sulfide to form an active metal sulfide. Also, each metal can exist as an oxide on an alumina carrier (see Sadakane, column 2, lines 39-53 and column 6, lines 15-34). Sadakane also discloses that the catalyst has a carbon content of 2.1 % (see Sadakane, column 7, lines 31-34 and 2.1% was obtained by multiplying the 3.9% coke by the atomic ratio of carbon to hydrogen of 0.53). Also, Sadakane discloses using the catalyst for hydrodesulfurizing catalytically cracked gasoline (see Sadakane, column 2, lines 32-34 and it is inherent that catalytically cracked gasoline boils between 5 carbons and 250 degrees C because applicant admitted so on page 12 in the specification, 4th paragraph).

Sadakane does not disclose where the specific surface area of the substrate is less than or equal to 130 m^2/g.

However, Da Costa discloses a support having a specific surface area in the range of 100 to 600 m^2/g (see Da Costa, column 3, lines 26-33).

Da Costa discloses that such a catalyst can advantageously carry out hydrodesulfurization (see Da Costa, column 2, lines 1-4).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to modify the process of Sadakane to include a support having a specific surface area in the range of 100 to 600 m^2/g because such a catalyst can advantageously carry out hydrodesulfurization.

11. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sadakane in view of Da Costa, as applied to claim 2, and further in view of Dufresne (US 5922638). Sadakane discloses everything in claims 1 and 2 (see paragraph 3), but does not disclose where the overall sulfur content in the catalyst is between 60 and 140 % of the sulfur content that is necessary for the total sulfurization of the entire group VI and VIII metals of the catalyst.

However, Dufresne discloses that the amount of sulfur used in presulfiding a catalyst is 0.5 to 1.5 times the stoichiometric amount of sulfur that it takes to give metals their sulfurized form (see Dufresne, column 4, lines 40-49).

Dufresne discloses that it is common practice to presulfurize a catalyst in this amount (see Dufresne, column 4, lines 40-49).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to modify the process of Sadakane to include that the amount of sulfur used in presulfiding a catalyst is 0.5 to 1.5 times the stoichiometric amount of sulfur that it takes to give metals their sulfurized form because it is common practice to presulfurize a catalyst in this amount.

12. Claims 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Da Costa in view of Sadakane. Da Costa discloses everything in claim 6 (see paragraph 6), but does not disclose where the stage for deposition of carbon is carried out during the activation stage.

However, Sadakane discloses where the presulfurization is carried out during the depositing of coke (see Sadakane column 5, lines 33-36).

According to *In re Burhans,* 154 F.2d 690 (CCPA 1946), the selection of any order of performing process steps is prima facie obvious in the absence of new or unexpected results.

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to modify the process of Sadakane to include where the presulfurization is carried out during the depositing of coke because the selection of any order of performing process steps is prima facie obvious.

13. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Da Costa. Da Costa discloses everything in claim 6 (see paragraph 6), but does not disclose where the stage for deposition of carbon is carried out at the same time as the impregnation of metals of Groups VI and/or VIII by depositing a precursor that contains carbon at the time of impregnation of the metals.

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the process of Da Costa to include where the stage for deposition of carbon is carried out at the same time as the impregnation of metals of Groups VI and/or VIII by depositing a precursor that contains carbon at the time of impregnation of the metals since it has been held that the selection of any order of performing process steps is prima facie obvious in the absence of new or unexpected results (*In re Burhans,* 154 F.2d 690 (CCPA 1946)).

Response to Arguments

14. Applicant's arguments with respect to claims 1-14 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John C. Douglas whose telephone number is 571-272-1087. The examiner can normally be reached on 7:30 A.M. to 4:30 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn A. Caldarola can be reached on 571-272-1444. The fax phone

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JCD

10/07/2006

Glenn Caldarola
Supervisory Patent Examiner
Technology Center 1700